Technology for the benefit of people and the environment
Strategy of Tampere University of Technology for 2016–2020

VALUES

Courage, responsibility and community spirit
Tampere University of Technology courageously explores new avenues of research and education in the fields of engineering. We acknowledge our responsibility for the future by maintaining high ethical standards in all our endeavours for the benefit of the environment, Finnish society and all humankind. Our warm and inclusive campus culture is conducive to academic and professional success.

MISSION
Tampere University of Technology is at the leading edge of technological development and a sought-after collaboration partner among the scientific and business communities. The University produces skilful graduates to serve the needs of society.

VISION
We foster the well-being of people and the environment through research and education. We develop technologies that reshape the competitive landscape of Finnish industry. We are committed to internationalization. We promote openness of science and research.

The new university to be established in 2020 through a merger between the higher education institutions in Tampere will be an internationally attractive research-intensive university. It will create new knowledge and open up unparalleled opportunities for multidisciplinary breakthroughs in technology, natural sciences, health sciences, economics and social sciences. The new university will offer flexible paths to degrees and thereby respond to the changing needs of the labour market.

TASKS

Research
Technology holds the key to addressing global challenges. Our research combines natural sciences, the fields of engineering, and business. Our distinctive strengths lie in the interaction between fundamental and applied research, expanding international networks, and research projects that cut across conventional disciplinary boundaries.

Education
The technological expertise of our students is built on a solid foundation in mathematics and natural sciences. Students learn to understand the importance of technology in addressing the challenges of sustainable development and have the opportunity to develop their entrepreneurial skills. Our graduates are active professionals who take responsibility for their work and have the skills needed in the labour market. Our teachers have a deep understanding of their subject and extensive pedagogical competence. The University enjoys a reputation as a forerunner in the development and implementation of new learning environments and provides multiple avenues for lifelong learning.

Societal impact
We generate new knowledge and expertise for the benefit of society. Our University is a sought-after partner for research and development projects conducted in collaboration with business and industry and a fertile breeding ground for innovations and new research- and knowledge-based companies. We maintain close ties with national and international networks and actively contribute to public debate. Our graduates fare exceptionally well in the job market. They have an independent mind, the inclination and ability to make an impact on society, and the skills to succeed in today’s global operating environment.
SUCCESS FACTORS

Competent people
We are a community of professionals that recognizes that competent, motivated and contented employees and students are our most valuable assets. Each recruitment process is carefully conducted, and we invest in open international recruitment to pull in the best talent. We want to be the best employer among Finnish universities.

Inspirational environment
We are committed to inspiring, fair and productive leadership and academic integrity across the University. We offer our employees challenging tasks, high-quality facilities and tools, performance-based pay and opportunities for professional growth. Our close collaboration with companies motivates us to apply scientific knowledge to real-life problems. We provide our students with a first-rate learning environment, excellent facilities for extracurricular activities, and support for creative projects related to their studies. The best campus in Finland and our superior Student Services promote professional and academic achievement among the members of the campus community.

Excellence
Our University encourages the pursuit of excellence in research, education and societal impact. We allocate appropriate resources to the leading-edge fields and actively seek to identify and strengthen promising areas and new lines of research. We support the commercialization of research results and the establishment of new companies.

PROFILE

We pursue competitive, high-quality research that paves the way for new technologies and operating models. We produce professionals who have the expertise to generate and transfer new knowledge to industry and society. We actively contribute to the creation of new business opportunities, companies and jobs arising from our research. We strengthen the industrial competitiveness and export industry of Finland.

Digital operating environment – harnessing machine intelligence for the benefit of people
The transition into the digital age opens up unprecedented opportunities for the interaction between people and machines. We build a better future by processing and analysing exponentially growing volumes of data and pursuing radical new avenues of research. We explore technologies for transferring data between machines. Our University enjoys a reputation for research excellence in signal processing. We are seeking to become the world’s foremost hub of research in intelligent machines and networked systems.

Energy- and eco-efficiency – circular economy for a greener tomorrow
Effective use of energy and raw materials cuts costs and helps protect the environment. We study and develop new technologies and materials for energy production, intelligent energy systems and for improving life-cycle performance and environmental impact management. We maintain a world-class research infrastructure that supports research in the field of energy-efficient construction. Our goal is to establish an international reputation for research in circular economy.

Health technology – better quality of life through new technology
The key to our success in health- and biotechnology research is our close and multidisciplinary collaboration with biologists and clinicians. We place special emphasis on diagnostic and regenerative technologies and develop new methods for monitoring and maintaining human health. We are internationally recognized for our expertise in biomodelling. Our distinctive and scientifically ambitious research is geared towards applications that improve the quality of people’s lives.

Light-based technologies – natural sciences lay the foundation for technological breakthroughs
The science of light underpins much of modern science, technology and data communications. Our University is one of the world’s leading centres for photonics research. We develop new laser sources and methods for the sophisticated control and utilization of the properties of light. Together with new photosensitive materials, they drive the development of unique new applications in multiple areas. We conduct research in the fields of photonic materials and ultrafast, nonlinear phenomena with the aim of accelerating scientific and technological breakthroughs.